

IN THE DRAWINGS

Please cancel sheet 1 of the formal patent drawings, as filed, and consisting of Fig. 1. Please substitute therefor the enclosed Replacement Sheet also consisting of Fig. 1. Please also add the New Sheet of drawings consisting of Fig. 3, and which is also enclosed.

REMARKS

Applicant, his principal representatives in Germany, and the undersigned have carefully reviewed the first Office Action on the merits of September 27, 2006 in the subject U.S. patent application, together with the prior art cited and relied on by the Examiner in the rejections of the claims. In response, the Substitute Specification, drawings, and claims of the subject application have been amended. It is believed that the claims now pending in the application are allowable over the prior art cited and relied on, taken either singly or in combination. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

The present application discloses, and claims a device for clamping a dressing on a cylinder of a rotary printing press and a printing group of a rotary printing press, which printing group uses the device. Referring to Figs. 1 and 2 of the application, and the accompanying Substitute Specification, there are shown two embodiments of the device in accordance with the present invention. While the two embodiments have various structural distinctions, they both operate in the same manner to accomplish the same result.

A cylinder 01a or 01b, as seen in Figs. 1 and 2 respectively, is provided with a plate or dressing end receiving groove or channel 06a or 06b. Each such groove or channel has a groove opening 07 that includes a groove front edge 13 and a groove rear edge 14. The terms “front” and “rear” are taken with reference to a production direction of rotation, as indicated with the arrow P in both Figs. 1 and 2. These edges 13 and 14 define the starts of groove first and second opening walls 08 and 09.

Each groove carries a holding device 16 or 36, respectively. Each such holding device has a first clamping end that is used to engage a trailing end of a plate or dressing at a clamping point 25 or 45, respectively. In Fig. 1, the clamping point is at the second, trailing groove wall 09. In Fig. 2, the clamping point is at the first, leading groove wall 08. In both embodiments, the holding or clamping device 16 or 36 has a bearing point 24 or 40, respectively, which is located at a second end of the holding or clamping device 16 or 36, where that second end engages the groove. The engagement point is located in the groove opposite to the groove opening 07.

A spring 17 or 37 is located in the groove and acts on its respective holding or clamping device 16 or 36 intermediate the holding or clamping device's clamping end and bearing point. In both embodiments, the spring 17 or 37 performs two separate but

related functions. The spring 17 or 37 has a support point in the groove. In Fig. 1, that support point is indicated at 23. In Fig. 2, the support point is indicated at 43. In both embodiments, the respective support point is located in the groove opposite to the groove wall that defines the clamping point 25 or 45. Each spring thus urges the first or clamping end of the holding or clamping device into engagement with the trailing end of the respective dressing or plate. That is the first function of each spring.

The second function of each spring is a securement function. Each spring exerts a force on its respective holding or clamping device 16 or 36. The second force, which is indicated by the arrow F1 in each of the two embodiments, acts to hold the second end of the respective holding or clamping device 16 or 36 in place at its bearing point 24 or 40 respectively. Thus, each holding or clamping device 16 or 36 can exert a clamping or holding force against its respective dressing or plate trailing end while at the same time being held against the inner surface of the cylinder groove at a point generally opposite to the groove opening.

In the Office Action of September 27, 2006, the Examiner objected to the drawings for several reasons. It was asserted that the features recited in claims 44, 45, 59 and 66 were not shown in the drawings. In response, claims 44 and 45 have been

amended. With respect to claim 45, the rocker is described in paragraph 021 of the Substitute Specification and has a rocker bearing point 22 which is depicted in Fig. 1 as being in engagement with the wall 09. Claim 59 has been cancelled. These claim changes are believed to overcome the Examiner's objection to the drawings for those claims. An additional drawing figure, Fig. 3 has been added by the presentation of a new sheet of drawings. Fig. 3 depicts the subject matter of claim 66. The subject matter of claim 66 is described in detail in the Substitute Specification of the application at paragraph 029. That paragraph has been amended to recite the newly added Fig. 3. In addition, paragraph 011 of the substitute specification, which is the Brief Description of the Drawings, has been amended to recite the addition of newly added Fig. 3. It is believed that the addition of Fig. 3 does not add any new matter. Fig. 3 is essentially a combination of Figs. 1 and 2. Additionally, Fig. 3 is described in detail in the substitute specification at paragraph 029. Entry of the new drawing figure into the application is respectfully requested.

The drawings were objected to because there were two separate uses of the reference numeral 14. The undersigned has reviewed the Examiner's objection and is in agreement that the occurrence of reference numeral 14 in Fig. 1, adjacent reference

numeral 16, is incorrect. The submitted Replacement Sheet removes that reference numeral from Fig. 1. Newly added Fig. 3 also does not have that incorrect reference numeral. This change clearly does not constitute any new matter and overcomes the Examiner's objection to the drawings on this basis.

The drawings were additionally objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the reference symbol gamma " γ " which is not recited in the Substitute Specification. The undersigned has reviewed the Examiner's proposed revision of the Substitute Specification, and has adopted it. Paragraph 022 of the Substitute Specification has been amended to recite the reference symbol " γ " and to clarify recitations of the walls 08 and 09 as being first and second walls, respectively. The reference symbol " γ " has also been added to paragraph 030 of the Substitute Specification where the same obtuse angle is described. These changes to the Substitute Specification do not constitute any new matter and merely add the reference symbol γ that is present in the drawings, as filed.

During the revision of the Substitute Specification, in connection with the addition of the description of newly added Fig. 3 and the addition of the reference symbol γ , a minor typographical error was noted at paragraph 21. This has been corrected and

does not add any new matter. The other changes made to the Substitute Specification have all been discussed above.

Claims 39-68 and 76 were objected to as having various informalities. Various ones of these, such as the indication of a second period in claim 39, are minor and have been corrected. One asserted informality is of consequence and will be addressed in detail. It is the Examiner's questioning of the recitation of the "holding" force and of the "counterforce" as possibly being the same force. This question carries on in the Examiner's assertion that claim 39 attempts to be a generic claim but that it is only directed to the embodiment of Fig. 1. The Examiner's suggested language change and her consideration of claim 39 as having the suggested language, while appreciated as an effort to advance the prosecution of the application, are believed not to be wholly correct.

Claim 39 has been amended in an effort to both clearly render it generic and to clearly define over the prior art of record. The generic aspect of claim 39, as amended, will be discussed here. The discussion of its patentability over the prior art will be deferred to a subsequent section. In the substitute specification of the application, as paragraphs 006 and 008, it is recited that the holding device is a pivotable lever, as

recited in claim 39 and that the spring element exerts both a clamping force and a fixing or securement force on the holding device. Note the last two lines of paragraph 006 in this regard. Paragraph 008 recites that the holding device or the clamping device both exert a clamping force on the dressing end and also a force so that the holding device is effectively held in the groove.

Claim 39 has been amended to recite that the holding device is acted on by at least one spring element in the groove. This spring element exerts both a clamping force and a securement force on the holding device. This language is taken from paragraph 06 of the Substitute Specification. The dressing trailing end leg is held against its one of the first and second groove opening walls, at the clamping point, by the clamping force exerted on the holding device. Claim 39 also recites that the spring element secures the holding element in the bearing point by the securement force exerted by the spring element. Claim 39, as thus amended, is believed to be generic to both of the Fig. 1 and Fig. 2 embodiments. It is believed that claim 39, as amended is generic. Accordingly, the language of claims 48, 50, 55, 61, 62, 64 and 65, to the extent that it is directed to one of the embodiments, is believed to be proper dependent claim language.

Claim 41 has been amended in a manner as suggested by the Examiner. It is believed that claim 41, as amended, is directed to the embodiment of Fig. 1 in which the support point, generally at 25 is on the groove wall which is first in the production direction. Claims 42-44 depend on claim 41 and are believed to be consistent with the depiction of the invention shown in Fig. 1.

Claims 45 and 47 have been amended as suggested by the Examiner. In claim 54 the "first" edge has been amended to a "front" edge. This change is believed to overcome the objection to claim 54. Claim 55 has also been amended to change "edge" to "groove opening wall," which language finds support in claim 48. With respect to claim 66, the language inconsistencies noted by the Examiner have been corrected. It is thus believed that the various objections raised by the Examiner to the claims have been overcome.

Claims 39, 47, 48, 50, 51, 53, 56 and 58-60 were rejected under 35 USC 102(b) as being anticipated by U.S. patent No. 3,362,327 to Luehrs. Claims 52 and 57 were rejected under 35 USC 103(a) as being unpatentable over Luehrs in view of U.S. patent No. 4,938,134 to Dörsam. Claim 63 was rejected under 35 USC 103(a) as being unpatentable over Luehrs in view of U.S. application No. 2002/0189470 to Holm.

Claims 66, 68 and 76 were rejected under 35 USC 103(a) as being unpatentable over Holm in view of Luehrs. Claims 4-46, 49, 54, 61, 62, 64, 65 and 67 were objected to as being dependent on a rejected base claim but as being allowable if rewritten in independent form.

The newly cited Luehrs patent No. 3,362,327 has been carefully reviewed. It is believed that this patent describes a device whose structure and principle of operation are both different from the subject invention. Initially, it is to be noted that the Luehrs device is intended to both clamp and to tension a plate that is supported on the cylinder. This is initially noted at Column 1, line 35. This combination of clamping and tensioning is also discussed in Luehrs at Column 2, lines 55-58.

As may be seen most clearly in Figs. 5 and 6 of Luehrs, there is provided a slot 2 that carries plate end clamps 4 and 5. These plate end clamps are moved in the slot 2 by the rotation of shafts 6 and 7 that each have eccentric portions 15 and 16, respectively. When the plate end holding devices are in their locked positions, as depicted in Fig. 6, the eccentric portions of the shafts move out of contact with the surfaces 17 and 18 of the two clamps 4 and 5. The clamps 4 and 5 are thus caused to move downwardly, or radially generally inwardly. The shafts are each held in either their

locked or unlocked positions by spring-biased ball detents 22 and 23 that act on exterior shaft collars, as seen in Fig. 1a.

As may be seen in Figs. 5 and 6, each plate end clamp 4 and 5 is forced down into the slot 2, where its respective shaft has been rotated to its locked position, by a plug 9a. That plug 9a is forced to the left, as seen in Figs. 5 and 6, by a spring force imparted by spring 9. Each spring produces two forces, both of which are plate end clamping forces. Each spring 9 clamps both of the plate ends against each other and also clamps both against the inclined surface 8 of the slot 2. One force is directed against the ends of the plates. The other is directed downwardly along the slanted wall 8 of the slot. The first force holds the plate ends in the slot. The second tensions the plate by forcing the plate end, and its clamp further into the slot.

As can be seen in Figs. 3, 4 and 6, when the shafts are in their plate locking positions, the clamps 4 and 5 are out of contact with the eccentric portions 15 and 16 of the respective shafts 6 and 7. In this plate locking position, the shafts cannot provide a bearing point for the clamps because the clamps are free to slide up or down along the inclined surface 8 of the slot 2. When the shafts are rotated to shift the clamps between their locked and unlocked positions, a lower lip of each such clamps 4 or 5 is slid along

the floor of a notch or channel in the bottom of the slot 2. This sliding motion occurs until the juncture of the lip with the body of each clamps engages an edge of the notch or channel. The clamp 4 or 5 then rotates to disengage the associated clamp from the end of the plate. This is discussed in detail starting at Column 2, line 68 and continuing to Column 3, line 3. As the clamps are moved radially outwardly or upwardly in the slot 2 by the engagement of the shaft eccentrics with the lower arcuate surfaces of the clamps, the pivoting movement of the clamps will bear against the plugs 9a and force them back against the force of the springs 9. This is shown in Fig. 5 which depicts an unlocked position.

The springs 9 press the clamps 4 and 5, in their plate locking positions against the slanted wall 8 of the slot 2 and also radially inwardly only during plate locking. The plates are held against the slanted wall 8 only in the locking position. There is no force exerted by the springs 9 on the clamps 4 and 5 in the direction of the notch or channel at the bottom of the slot 2. There must, as discussed above, be some space to allow the clamps to move radially up and down or in and out. There must also be some space to allow the clamps 4 and 5 to pivot above the fulcrum point provided by the edge of the channel or notch, as discussed at the top of Column 3. The result is that the notch or

channel of the slot 2 and the lower lip or edges of the clamps 4 and 5 are not always in engagement. Accordingly, this structure cannot form a bearing point.

When the plate end, shown in Fig. 5 in its unlocked position, is inserted into the slot 2, the plate beveled or angled end fits into a recess in the clamp 5. As the shaft is rotated to the locked position, the clamp 5 is not longer supported by the shaft eccentric and can slide radially inwardly in the slot 5 under the influence of the plug 9a, as biased by the spring 9. The force of the spring 9 that moves the clamp along the sloped wall 8 of the slot 2 accommodates any stretch or thermal expansion of the plate.

It is quite clear from a careful reading of the Luehrs patent that this prior art device does not show a spring element that provides both a clamping force and a securement force to the dressing end holding device. It is also clear that Luehrs does not show, or suggest a bearing point in the groove, which bearing point is opposite to the groove opening. Claim 39, as currently amended, is thus believed not to be anticipated by Luehrs and is also believed not to be obvious over the Luehrs reference. It is clear that Luehrs uses a radially slidable clamp to engage a cooperatively shaped end of a plate and to pull that plate end radially into the cylinder slot 2. The Luehrs device thus exerts a clamping force in the plate ends and a tensioning force, also on

the plate ends. The spring 9 of Luehrs does not exert any force on the clamps 4 or 5 to retain the clamps in the slot 2. There is no bearing point in Luehrs. The springs 9 of Luehrs do not provide both a clamping force and a securement force on the holding device. The Examiner's characterization of the Luehrs reference is not supported by a careful reading of that reference.

The various dependent claims that were rejected with claim 39 all depend from claim 39, either directly or indirectly. Since claim 39 is believed not to be anticipated by, nor obvious over the Luehrs reference, it is believed that the claims rejected with claim 39 are also believed to be allowable.

Claims 52 and 57 were rejected as being obvious over Luehrs in view of Dörsam. The secondary reference is cited as showing a leaf spring and a hose. In the Dörsam reference there is shown a plate clamping assembly that uses a clamping bar to engage an end of a plate. The clamping bar is pivotable through the action of a spring-biased elbow lever which can include a leaf spring. A hose or hoses act against the forces of the coil springs or leaf spring that move the elbow levers. While it is not new to use inflation devices and springs generally in plate end clamping devices, the disclosure of Dörsam would not be combinable with the disclosure of Luehrs in a

manner that would provide the teachings of the present invention which are missing from Luehrs.

Independent claim 66 has been amended to overcome the objections raised by the Examiner. It has also been amended in a substantive manner so that the recitation of the printing forme trailing end holding means and the recitation of the support plate trailing end clamping element are similar to the recitation of claim 39, as currently amended. It is acknowledged that the use of cooperating cylinders, each with plate end clamping assemblies, is also generally known in the art, as exemplified by the Holm reference. However, the specific plate end clamping structure, as shown in Fig. 8 of Holm, would not meet the limitations of claim 39, as currently amended. Thus claim 66, which is essentially the same as claim 39, in its recitation of the plate or dressing end clamping assembly, is not rendered obvious by the combination of Holm and Luehrs.

The Examiner's indication of the allowability of various ones of the dependent claims is noted with appreciation. However, it is believed that claims 39 and 66, as currently amended, are each patentable over the prior art cited and relied on. The limitations of these various indicated allowable dependent claims have thus not been incorporated into claim 39 at this time.

The citation of the Schneider reference, U.S. patent No. 6,675,708 is noted.

Since it was not relied on in the rejections of the claims, no discussion thereof is believed to be required.

SUMMARY

The Substitute Specification and drawings have been amended. The various changes made thereto are believed not to constitute any new matter.

Independent claims 39 and 66, and various ones of the dependent claims, have been amended. It is believed that the claims now pending in the application are patentable over the prior art patents cited and relied on, taken either singly or in combination. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

Karl Robert SCHÄFER

Applicant

JONES, TULLAR & COOPER, P.C.

Attorneys for Applicant

By : 

Douglas R. Hanscom

Reg. No. 26, 600

December 27, 2006

JONES, TULLAR & COOPER, P.C.

P.O. Box 2266 Eads Station

Arlington, Virginia 22202

(703) 415-1500

Attorney Docket: W1.1674PCT-US